clarion®

Owner's manual
Manuel d'installation et ode d'emploi
Installation/Benutzerhandbuch
Manuale di installazione/Dell'utente
Installatie/Gebruikershandleiding
Manual de Instalación/Propietario
Installations-/Ägarmanual
Manual de Instalação/Do Utilizador

BLT373

***BLUETOOTH*® AUDIO/MOBILE-PHONE TRANSCEIVER FOR AUX INPUT**
EMETTEUR-RECEPTEUR AUDIO/TELEPHONE MOBILE *BLUETOOTH*® POUR ENTREE AUX
***BLUETOOTH*® AUDIO/MOBIL-TELEFON TRANSCEIVER FÜR AUX**
RICETRASMITTENTE AUDIO/TELEFONO CELLULARE BLUETOOTH® PER INGRESSO AUX
BLUETOOTH® ZENDONTVANGER VOOR AUDIO/MOBIELE TELEFFON VIA AUX-INGANG
TRANSCEPTOR DE TELÉFONO MÓVIL/AUDIO BLUETOOTH® PARA ENTRADA AUXILIAR
***BLUETOOTH*® SÄNDARMOTTAGARE FÖR LJUD/MOBILTELEFON VIA AUX-INGÅNG**
TRANSRECEPTOR DE ÁUDIO/TELEMÓVEL *BLUETOOTH*® PARA ENTRADA AUX

Clarion BLT373

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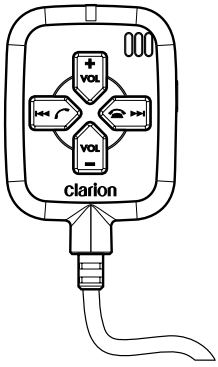
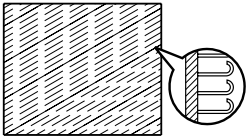
1. WHAT IS INCLUDED IN THIS PACKAGE?

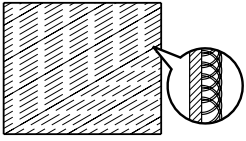
A complete BLT373 package consist of the following items:



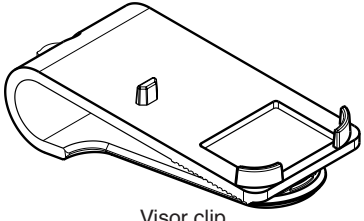
Bluetooth® Audio/Mobile-phone Transceiver unit with 2.5m cable and LC box



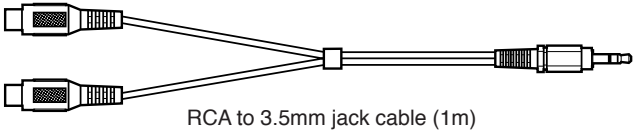
Velcro hook (x2) with double-sided tape attached



Velcro loop (x2) with double-sided tape attached



Visor clip



RCA to 3.5mm jack cable (1m)

Clarion *Bluetooth*® Audio/Mobile-phone Transceiver (BLT373)

The BLT373 is a handsfree car kit featuring *Bluetooth*® wireless technology that allows you to utilize your car's built-in audio system for wireless music streaming and wireless mobile phone handsfree communication.

- **Auto features:**
  - Auto-power up when car is started
  - Auto-connect with last paired mobile phone, upon power up (Depends on multiple re-connection mode).
  - Auto-switching between music streaming and handsfree mode with *Bluetooth*® technology

- **Music streaming features:**
  - High quality wireless digital music streaming (dependent on paired device capabilities)
  - Remote control for remote device (dependent on paired device capabilities)
  - Volume adjustment

- **Car kit features:**
  - Auxiliary output for plugging into car stereo system
  - Tel-interrupt pin to switch car stereo to auxiliary-mode for mobile phone communication
  - Built-in microphone, with optional external microphone support.
  - Acoustic Echo Cancellation (AEC) and noise suppression
  - Left/Right channel switch (to set speaker output channel)
  - One-press pick-up/end/reject call and volume controls
  - Call transfer
  - Volume adjustment

- **Telephone interrupt pin**
  The cable on the Transceiver is equipped with a telephone interrupt pin (TEL-INT). Such mechanism can be used to notify the car stereo unit to switch mode when it detects incoming call and transferring call.

- **Automatic *Bluetooth*® profile switch**
  If the Transceiver is paired to both a ***Clarion Bluetooth® Audio Transmitter and Cradle for iPod®*** [1] and a mobile phone, when there is an incoming call, a stereo ringing tone will be heard and any music streaming will be temporarily muted until call is ended or rejected.

- **Acoustic Echo Cancellation**
  Voice signals from the loudspeaker often appear at the microphone, this causes conversational interference in the form of acoustic echo and howling. With this advanced DSP-based Acoustic Echo Cancellation (AEC) system built-in, it is capable of handling full-duplex communication, echo cancellation and noise suppression on the microphone input to enable smooth handsfree communication and crystal clear speech.

- **Separate volume control**
  There are two set of volume settings, one for handsfree mode and one for music mode. This can ensure that the user can set the desired volume for speech and music separately without having to change the volume when picking up and ending call between music streaming.

Note:

[1] ***Clarion Bluetooth® Audio Transmitter and Cradle for iPod® (DGL373 and BC001N/BC002M/BC003V)*** are Clarion products (sold separately) that supports music streaming via *Bluetooth*® wireless technology. Please consult your local authorized Clarion dealer for more information about the product.

Installing BLT373

This Transceiver unit is used to receive audio signals via *Bluetooth*® wireless technology from other *Bluetooth*® device and stream it to the car audio system. The attached cable has a pair of auxiliary output, a 12V power connector (with LC box attached) and a TEL-INT (Telephone interrupt) pin.

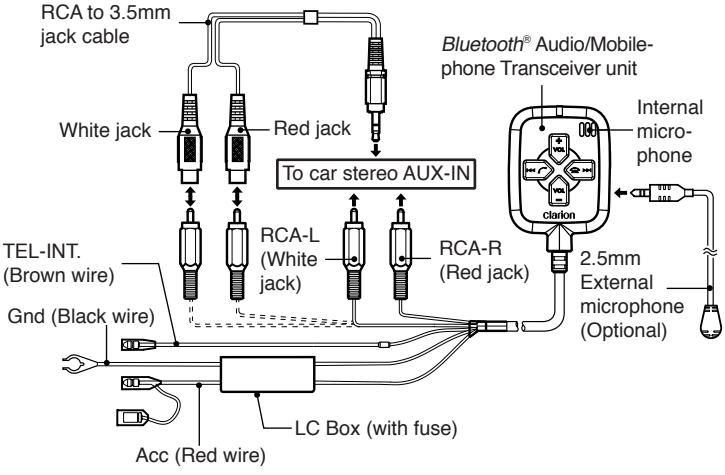


Figure 1: System diagram

Instructions

1. Connect the 12V (Acc and Gnd) to car supply.
2. Connect the RCA-L and RCA-R to car stereo auxiliary (AUX) input. Alternately, you can use the RCA to 3.5mm jack cable (included) to connect to car stereo that supports 3.5mm AUX input.
3. Connect TEL-INT. pin to car stereo telephone mute line (if this feature is supported).
4. Make sure that the car stereo system's telephone interrupt is ON.

English

5. Use Velcro with double-sided tape to hold the visor and Transceiver unit if necessary. (shown in Fig. 2). Detail of using Velcro will be explained as the followings:
   Step 1: Attach the Velcro hook to the visor clip with the double-sided tape provided.
   Step 2: Attach the Velcro loop to the hook.
   Step 3: Attach the Transceiver unit to the Velcro loop with the double-sided tape provided.
6. Secure the Transceiver unit to a location that is easily accessed by the driver e.g. sun visor (shown in Fig. 3) and dash board (shown in Fig. 4).
7. Set the left/right channel switch according to the position of driver (see "**Switching left or right channel output**" on page 23 for details).
8. Once the car is started, the Transceiver is powered on immediately. It cannot be turned off as long as the ignition key is turned to ON or ACC position.

Notes:

- Check that the location of the Transceiver is adequate to pick-up the car driver voice.
- Alternately, user can use the external microphone (optional) that plug into the 2.5mm audio jack input for a better voice reception.

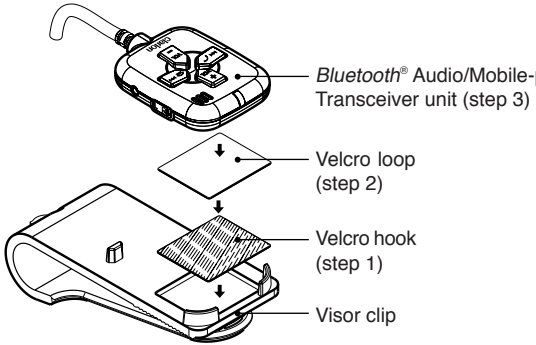


Figure 2: Using Velcro with double-sided tape

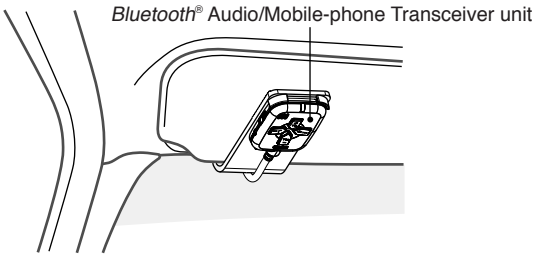


Figure 3: Fix the BLT373 to the car sun visor

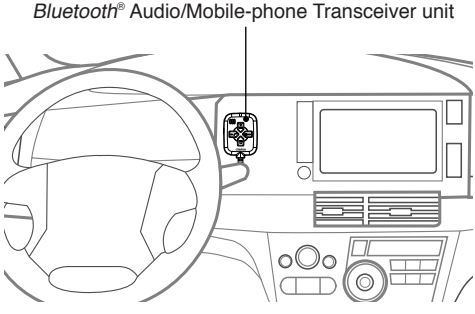


Figure 4: Fix the BLT373 to the dashboard

⚠ CAUTION

- Please refer carefully to the **system diagram** before installing your BLT373. Incorrect wiring method may cause damage to BLT373, your car audio system or even your vehicle.
- We strongly recommend that BLT373 is only installed by those fully familiar with your vehicle's electrical system, please consult with the supply retailer if any doubt.

4. INTRODUCTION TO *BLUETOOTH*® "PAIRING"

What is *Bluetooth*® wireless technology?

Bluetooth® wireless technology is a radio technology that connects devices, such as mobile phones and headsets, without wires or cords over a short distance of approximately 10 meters (approx. 33 feet). Get more information at www.bluetooth.com.

What is *Bluetooth*® wireless profiles?

Bluetooth® wireless profiles are the different ways that *Bluetooth*® devices communicate with other devices. *Bluetooth*® phones support either the headset profile (HSP), the hands-free profile (HFP) or both. In order to support a certain of profiles, a phone manufacturer must implement certain mandatory features within the phone's software. The *Bluetooth*® Audio/Mobile-phone Transceiver unit supports both HSP and HFP profiles. In addition, it also supports A2DP and AVRCP in order to allow music streaming and playback control. Please refer chapter "**Music Streaming and Playback Control**" on page 19 for more description on these profiles.

What is pairing?

With a mobile phone featuring *Bluetooth*® technology, you must "**pair**" the Transceiver unit with the phone/*Bluetooth*® Audio Transmitter before you use it for the first time.

"**Pairing**" creates a unique wireless link between the phone/*Bluetooth*® Audio Transmitter with *Bluetooth*® wireless technology and your *Bluetooth*® Audio/Mobile-phone Transceiver unit eliminating the need to repeat the pairing process during future use. *Bluetooth*® devices will not work if the devices have not been paired.

What is passkey?

Passkey or PIN is a code that you enter on your mobile phone to pair it with the Transceiver unit. This makes your phone and the Transceiver unit recognize each other and automatically work together.

Pairing Sequence

Note:

- Please refer to Clarion *Bluetooth*® Audio Transmitter and Cradle for iPod owner's manual for the *Bluetooth*® Audio Transmitter operation below.

Between *Bluetooth*® Audio/Mobile-phone Transceiver and *Bluetooth*® Audio Transmitter

1. Make sure the Transmitter is connected to an audio source.
2. Make sure the car stereo source mode is switched to '**AUX**' mode.
3. Set the Transceiver unit in pairing mode. Please refer "**Activating *Bluetooth*® Transceiver pairing mode**" on page 17.
4. Set the Transmitter unit in pairing mode.
5. Music starts automatically upon successful pairing.

Notes:

- You do not have to enter a dedicated pin code for pairing these two devices, as you do with a mobile phone.
- During pairing mode, the Transceiver unit should show a slower alternate red/blue LED. Make sure that the Transmitter and Transceiver are not paired to any other Transceiver or Transmitter respectively.
- Please refer "**Understanding The Transceiver Unit Indicators**" on page 16 for further details.

Between *Bluetooth*® Audio/Mobile-phone Transceiver and mobile phone

1. Activate *Bluetooth*® on your mobile phone. Please check your mobile phone owner's manual for further details.
2. Set the Transceiver in pairing mode. Please refer "**Activating *Bluetooth*® Transceiver pairing mode**" on page 17.
3. Search for new *Bluetooth*® device on the mobile phone. The Transceiver unit's name is "**CLARION_HSF**".
4. When attempting to connect to the Transceiver unit, the mobile phone will prompt for a passkey, enter the PIN: "**0000**".
5. Incoming call will be automatically diverted to the Transceiver unit upon successful connection.

Notes:

- Always make sure the *Bluetooth*® operation mode in the phone is on when using a *Bluetooth*® car handsfree.
- During music streaming, pairing with mobile phone at the same time may cause choppy sound.

⚠ CAUTION

- The Transceiver unit can only pair and connect to ONE mobile phone at a time.
- In order to pair and connect to another mobile phone, user will have to disconnect the current mobile phone first. Please refer your mobile phone owner's manual for disconnecting device.
- The Transceiver unit can pair with the Transmitter unit and mobile phone at the same time as long as both device (Transmitter and mobile phone) do not use the same profiles (A2DP and AVRCP), which are used for music streaming purposes at the same time.

Automatic Connection

The *Bluetooth*® wireless function in your phone has to be turned on to establish automatic connection.

1. The Transceiver will establish an automatic connection in the following situations:
   - After a previously successful connection, and the Transceiver is switched on again, it will automatically try to re-connect with the last paired mobile phone (Depends on multiple re-connection mode). Connection may take up to a minute depending on the mobile phone.
   - Some mobile phones will require user confirmation for *Bluetooth*® connection. In such case, user will need to acknowledge the connection on the mobile phone before the connection is re-established.

2. The Transceiver will not establish an automatic connection or fail to connect in the following situations:
   - If the mobile phone already has connection with other handsfree/ headset
   - If the paired mobile phone is powered off and on (depends on mobile phone)
   - If the paired mobile phone is out of range
   - If the paired mobile phone is powered on after the Transceiver is turned on where multiple re-connection mode set to off.

   In such cases, the user will need to manually re-connect to the Transceiver through the mobile phone.

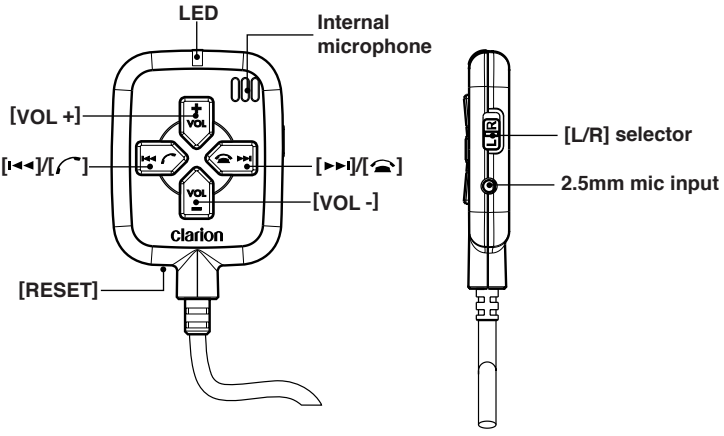
Note:

- If the Transceiver is switched off, some mobile phones may take a long time to detect the disconnection.

English

Buttons Terminology

Please make sure you have read through chapter "**Installing BLT373**" on page 7 before proceed to the following operations.



[⏮]/[↷] button

- During incoming call, press the button to pick up call.
- During phone conversation, press the button twice to transfer call.
- During music streaming for iPod, press and hold the button for 1 second to restart the current track.
- During music streaming, press and hold the button for 1 second (A2DP device) or 2 seconds (iPod) to move to previous track.

[⏭]/[☎] button

- During incoming call, press the button to reject call.
- During phone conversation, press the button to end call.
- During music streaming for A2DP device or iPod , press and hold the button for 1 second or longer to move to next track.

[VOL +] button

- Press the button to perform volume up.
- During music streaming, press and hold the button for 1 second or longer to play/pause the track.

[VOL -] button

- Press the button to perform volume down.
- During music streaming for A2DP device, press and hold the button for 1 second or longer to stop the track.

[RESET] button

- Use the button to reset the unit.

[L/R] selector

- Switch to left or right channel output for phone conversation.

Internal microphone

- Built-in microphone for phone conversation.

2.5mm mic input

- Connect to external microphone

LED

- Indicator that notifies the Transceiver status

Understanding The Transceiver Unit Indicators

Event	LEDs	
	Red	Blue
During power on (may auto connect)	Blink once	Lights up for 1-2 sec
During power on (mobile phone pairing info in memory)	Lights up for 2-3 sec	Lights up for 1-2 sec
Powered/ready	Blink once every 5 sec	-
Bluetooth® Pairing mode	Blink alternately every second	
Mobile phone connected (HFP/HSP)	Blink once every 5 sec	Lights up once every 5 secs
Incoming call	Blink alternately and rapidly	
Transmitter connected/ music streaming	Blink once every 5 secs	Blink rapidly
Transmitter and mobile phone connected	Blink once every 5 secs	Blink rapidly and lights up once every 5 secs
Call in progress	Blink once every 5 secs	Blink normally and lights up once every 5 secs
Mutliple re-connection mode is turned ON	-	Blinks rapidly for 1-2 sec
Mutliple re-connection mode is turned OFF	Blinks rapidly for 1-2 sec	-

Notes:

- When both red and blue LEDs are on, LED looks purple.
- Mobile phone with music streaming will be under the same category as “Transmitter and mobile phone connected”.

Basic Operations

- **Turning on the power**

  The unit turns on immediately when power is supplied. It can only be turned off if car engine is off.

- **Resetting the Transceiver unit**

  This function is used to restore to factory default setting and clear all the pairing information.

  1. Press the **[RESET]** button once to perform reset function.

Notes:

- Transceiver will remain as power on state.
- The previously-connected device(s) may still hold the Transceiver information. Thus if the device initiate a *Bluetooth*® connection when the Transceiver is in pairing mode, the connection may be successful.

- **Activating *Bluetooth*® Transceiver pairing mode**

  1. Turn on the Transceiver by powering up the car audio system, note that the Red LED blinks once every 5 seconds to confirm that the power is on.
  2. Press and hold the **[⏮]** and **[⏭]** buttons simultaneously for 2 seconds or longer to activate *Bluetooth*® pairing mode.

Note:

- If no device is paired to the Transceiver after 3 minutes, pairing mode will be cancelled.

For more information on *Bluetooth*® pairing, please see chapter "**Pairing Sequence**" on page 11.

Turning on/off multiple re-connection mode

This function allows user to switch on or off the multiple re-connection mode.

ON: Multiple attempts are made to auto re-connect with the last paired mobile phone (HSP/HFP) when Transceiver is powered up.

OFF: Only 1 attempt is made to auto re-connect with the last paired mobile phone (HSP/HFP) when Transceiver is powered up.

1. When the Transceiver is powered on (no device connected), press and hold the [**VOL +**] and [**VOL -**] buttons simultaneously for 2 seconds or longer to toggle multiple re-connection mode on or off.
2. Auto connection will be observed in the next powered up of the Transceiver based on the multiple re-connection mode setting.

Notes:

- Factory default setting is ON.
- Please refer to chapter "**Understanding the Transceiver Unit Indicators**" on page 16 for more information about the LED status.
- The multiple re-connection attempts will be terminated if the Transmitter (DGL373) is connected.
- Resetting the Transceiver will not change the multiple re-connection mode to original setting.

Music Streaming and Playback Control

Music streaming is a technique for transferring audio data such that it can be processed as a steady and continuous stream.

Users can stream music from their iPod or other external audio player to their car stereo and listen to the tracks through the car's speakers.

WHAT IS A2DP?

A2DP (Advanced Audio Distribution Profile) is a *Bluetooth*® profile that allows you to send CD quality stereo music from one device to another without wires. A2DP is able to provide crystal clear music without the hassle of plugging cables. *Bluetooth*® wireless technology with A2DP makes mobile phones, pda's and computers capable of streaming music.

WHAT IS AVRCP?

AVRCP (Audio Video Remote Control Profile) is another *Bluetooth*® profile that enables music from external audio player to be controlled remotely. AVRCP allows some basic playback control functions such as start/play/stop/pause, volume up/down and next/previous track to an external audio player.

⚠ CAUTION

- The Transceiver works as one way communication to the Transmitter. Thus, please avoid controlling the iPod and Transceiver at the same time as this might cause some incorrespondence operations between the both devices.

- **Play/Pause a track**
  Press and hold the **[VOL +]** button for 1 second or longer to play or pause the song.

- **Stop a track (For A2DP device only)**
  Press and hold the **[VOL -]** button for 1 second or longer to stop the song.

- **Restart a track (For iPod only)**
  Press and hold the **[⏮]** button for 1 second to restart the current song.

- **Selecting the next track**
  Press and hold the **[⏭]** button for 1 second or longer to select the next song.

- **Selecting the previous track**
  For A2DP device: Press and hold the **[⏮]** button for 1 second or longer to select the previous song.
  For iPod: Press and hold the **[⏮]** button for 2 second or longer to select the previous song.

- **Adjusting the music streaming volume**
  You can adjust the speaker volume during music streaming. Please leave the car audio system volume at the default volume and use the volume controls on the Transceiver to ensure that the volume do not vary too greatly when using different mode of the car audio system.
  1. Press the **[VOL +]** button to increase the volume.
  2. Press the **[VOL -]** button to decrease the volume.

Notes:
- There are 19 volume levels with default level setting is 14 upon power up.
- Changing the volume will not affect the internal volume status of the paired device. It will only affect car speakers' volume.
- For A2DP devices, after all 19 levels of volume adjustment have been exhausted, the Transceiver would start reducing/increasing the devices' volume.

Using Handsfree with *Bluetooth*® Wireless Technology

Note: The Clarion car stereo must activate the telephone interrupt mode to be able to work with the Transceiver. Please refer the car stereo owner's manual of each model for details.

Making a call

- **Calling with the phone's keypad**
  1. Using the phone keypad, dial the phone number.
  2. Press the phone "**SEND**" key - the phone is now connected to the Transceiver and your car stereo system will be muted. Talk as normal to the Transceiver unit, the voice of the person you're talking to will be heard through your car speaker.

Incoming call

A ringing tone will be heard. The red and blue LED will alternate blink quickly. Any music streaming will be temporary muted until a call is ended or rejected.

- **Answering a call**
  Whenever your car stereo is operating, the Transceiver unit is in standby mode awaiting the next call, when an incoming call arrives, the car stereo is muted automatically and the ring tone is reproduced through your car's speaker.

  1. Press the **[ ]** button once to answer the call and speak as normal.

  You may also answer the call by using your phone's answer keypad. In this case, you can transfer the call to the Transceiver by following the instruction in the section "**Transferring a call**" on page 22. However, some phones will require user to activate transfer call via the phone itself in this case.

Note:

- The Clarion car stereo must activate the telephone interrupt mode to be able to work with the Transceiver. Please refer the car stereo owner's manual of each model for details. Make sure that your mobile phone has set the Transceiver as the default headset/handsfree. Please refer your mobile phone owner's manual for the relevant setting.

- **To reject a call**
  User can reject an incoming call with this Transceiver unit.
  1. When the car handsfree rings, press the **[ ]** button once.

Note:
- This is dependent on the type of phone.

- **Ending a call**
  Use either one of the following methods to end a call:
  1. To end a call from the Transceiver unit, press the **[ ]** button once.
  2. End a call from the phone's keypad.

Note:
- When making outgoing call from a mobile phone, call cannot be terminated using the Transceiver unit. It can only be ended when the call is connected (conversation). Simply use the phone "**END**" key in order to terminate an outgoing call.

Transferring a call

- **To transfer the call to the phone**
  During a call, press the **[ ]** button twice.

- **To transfer the call to the Transceiver unit**
  During a call, press the **[ ]** button twice or use the transfer call function in the phone to transfer call back to car stereo.

Note:
- This function is dependent on the type of phone. Some phones are not supported.

Adjusting the telephone interrupt volume

You can adjust the speaker volume in a call via your Transceiver unit.

1. Press the **[VOL +]** button to increase the volume.
2. Press the **[VOL -]** button to decrease the volume.

Notes:

- There are 19 volume levels where default level setting is 14 upon power up.
- Use the **[VOL +]** and **[VOL -]** controls to adjust the telephone call reception volume and minimize any echo generated.
- Telephone default volume depends on each car stereo model. Please refer your car stereo owner's manual for further details.

Switching left or right channel output

You can switch to left or right channel output for a call.

1. Move the **[L/R]** selector to the right to enable right channel output.
2. Move the **[L/R]** selector to the left to enable left channel output.

Notes:

- If your car stereo supports telephone left/right selection, please make sure that both units (car stereo and Transceiver unit) are set to the same output channel.
- For left-hand drive car, the audio should preferably come out from the right speakers and vice-versa.

Connecting an external microphone (optional)

You can connect an external microphone to the Transceiver unit via the 2.5mm audio jack input for better voice reception. Audio input source will automatically switch from internal microphone to external microphone. Please consult your local authorized Clarion dealer for external microphone recommendation.

Note:

• Please use only 2.5mm jack external microphone.

6. COMPATIBLE MODELS

Supported Clarion car stereo

To enable stereo music streaming, the car stereo must come with AUX function.

To enable handsfree function, the car stereo must have telephone interrupt function.

Compatible with Clarion units from 2007 lineup with TEL and AUX function or consult your nearest Clarion dealer. Please check with your local dealer for compatibility with other car stereo.

Supported phones with *Bluetooth*® wireless technology

Make sure your mobile phone supports the following *Bluetooth*® profile:
- HFP/HSP (handsfree for mobile phone)

Optional profiles for music streaming in mobile phone:
- A2DP (stereo music streaming)
- AVRCP (remote control function)

Please check your phone's specification for supported profiles.

Supported device with *Bluetooth*® wireless technology

BLT373 is specially designed and work best with Clarion *Bluetooth*® Audio Transmitter (DGL373) and Cradle for iPod (BC001N/BC002M/BC003V). Please consult your nearest Clarion dealer for the product offer.

	Problem	Cause	Description
Transceiver	The power of Transceiver unit does not turn on	Fuse is blown.	Replace with a fuse of the same amperage (2A) in the LC box. If the fuse blows again, consult your store of purchase.
		Incorrect wiring.	Consult your store of purchase.
	The red or purple LED lights up all the time.	Power-up failure The device may not be start upon power on.	1. Power off and on the device until the blue LED blinks correctly. 2. Press the reset button.
	Blue LED lights up all the time. Transceiver is not responding.	The Transceiver has malfunctioned due to some conflicts such as multiple pairing at the same time.	Power off and on the device until the blue LED blinks correctly.
	Cannot pair the car handsfree with the phone	The *Bluetooth*® function in your phone is off or car handsfree is off.	The *Bluetooth*® function in your phone must be set to Automatic or On. Your phone should be inside the car during the pairing procedure. The car handsfree must be on.
	Unable to auto connect with phone upon power up	*Bluetooth*® function is is disabled in your phone.	The *Bluetooth*® function in your phone must be set to Automatic or ON.
		Multiple re-connection mode is off. The auto connection may not be successful if there is no *Bluetooth*® link detection for the first and only one re-connection attempt.	Turn on multiple re-connection mode and restart the Transceiver.
			Manually reconnect via your phone.

	Problem	Cause	Description
Transceiver	Cannot connect to the car handsfree	The car handsfree may be connected to another *Bluetooth*® device or your phone may be connected to another *Bluetooth*® device, such as a headset. You may have paired your phone with another handsfree device.	Disconnect the other *Bluetooth*® device. Some phones can only be paired with one handsfree device at a time. Please check your phone owner's manual.
	When Transceiver is paired with certain mobile phones (e.g. Nokia 6233), pressing the keypad of the mobile phone causes the audio streaming from the Transmitter to be muted.	This is a feature of the mobile phone: Any audio activities, including keypad tones, are transmitted to the Transceiver unit	Depending on mobile phone software, turning off the keypad tones and alert tones may resolved this issue.
Others	No sound contact between car handsfree and phone	No pairing between car handsfree and phone.	The car handsfree and the phone you are using with it have to be paired to recognize each other, and within range.
		Car stereo volume is too low.	Increase the volume in the Transceiver unit or car stereo if necessary.
	Telephone call is not interrupted to car stereo	Telephone interrupt is off	Set the telephone interrupt to ON.

Compliance	*Bluetooth*® 1.2
Profiles	A2DP (stereo music streaming) AVRCP (remote control function, e.g. play/stop, volume up/down) HFP/HSP (handsfree for mobile phone)
Wireless range	Class 2: Up to 10m (line of sight)
Sensitivity	- 80dBm
Data rate	Forward: 723kbps Reverse: 57kbps
Antenna	2.45 GHz chip type
Compression/decompression algorithm	SBC (sub-band coding)
Bit rate	Variable (<350kbps typical)
Stereo audio	16kHz-48kHz, 16bit (for music)
Mono audio	8kHz,16bit (communication)
iPod support	MMI support for iPod e.g. play/pause, next/previous track etc
Operating temperature	- 20°C ~ 60°C
Storage temperature	- 40°C ~ 85°C
Dimensions	Approx. 44mm (Width) x 63mm (Height) x 11mm (Depth)
Weight	Approx. 160g
Audio bandwidth	30Hz - 20kHz
Signal-to-Noise Ratio	~ 84dB
Mic input	2.2k ohm
Analog output	Line level (1 Vrms)
1 mic with AEC	a) Adaptive acoustic echo cancellation (~ 48dB) b) Adaptive background noise suppression (~ 12dB)
Voltage source	Max.16VDC
Max current	40 - 50mA
Cable length	2.5m
LC box fuse amperage	2A

Safe and efficient use

Note:

Read this information before using this product.

Changes or modifications to this product not expressly approved by **Clarion** may void the user's authority to operate the equipment.

Please check for any exceptions, due to national requirements or limitations, in usage of equipment with *Bluetooth*® wireless technology before using this product.

Product care

- Do not expose your product to liquid or moisture or to humidity.
- Do not expose your product to extreme high or low temperatures.
- Do not expose your product to lit candles, cigarettes, or cigars, or to open flames etc.
- Do not drop, throw or try to bend the product as rough treatment could damage it.
- Do not use any other accessories than **Clarion** originals intended for use with this product. Use of non-original accessories may result in loss of performance, damage to the product, fire, electric shock or injury. The warranty does not cover product failures which have been caused by use of non-original accessories.
- Do not attempt to disassemble your product. The product does not contain consumer serviceable or replaceable components. Only **Clarion** service partners should perform service.
- Do not keep the product in an area prone to dust and dirt. Only use a soft damp cloth to clean your product.
- If you will not be using the product for a while, store it in a place that is dry, free from damp, dust and extreme temperatures.
- To reduce risk of electric shock, unplug the unit from any power source before attempting to clean it.

Installation

Please note that only authorised personnel should install this product. Please check with your car dealer for recommendations on professional installation engineers. Check with your car manufacturer's representative to be sure that all equipment for this product, including additional accessories, is placed in a safe location. If your car is equipped with an air bag, check that the handsfree equipment does not interfere with its function.

This product equipment is made for use in cars with a 12 volt electrical system. Other supply voltages may cause damage to the equipment.

Radio frequency exposure

This product is a radio transceiver. When in operation, it communicates with a mobile device featuring *Bluetooth*® wireless technology by receiving and transmitting radio frequency (RF) electromagnetic fields (microwaves) in the frequency range 2400 to 2500 MHz. The output power of the radio transmitter is low, 0.001 watt.

This product is designed to operate in compliance with the RF exposure guidelines and limits set by national authorities and international health agencies when used with any compatible mobile phone with *Bluetooth*® wireless technology.

Driving

Check the laws and regulations on the use of mobile phones and handsfree equipment in the areas where you drive.

Always give full attention to driving and pull off the road and park before making or answering a call if driving conditions so require.

RF energy may affect some electronic systems in motor vehicles such as car stereo, safety equipment etc. Check with your vehicle manufacturer's representative to be sure that your mobile phone or this *Bluetooth*® audio/mobile-phone transceiver will not affect the electronic systems in your vehicle.

Electronic equipment

Most modern electronic equipment is shielded from RF energy. However, certain electronic equipment is not, therefore:

Do not use this product near medical equipment without requesting permission. If you are using any personal medical devices, e.g. a pacemaker or a hearing aid, please read in your mobile phone's User's Guide for further information.

Blasting areas

Turn off all your electronic devices when in a blasting area or in areas posted **turn off two-way radio** to avoid interfering with blasting operations. Construction crews often use remote control RF devices to set off explosives.

Potentially explosive atmospheres

Turn off your electronic device when in any area with a potentially explosive atmosphere. It is rare, but your electronic device could generate sparks. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked.

Children

Do not allow children to play this product since it contains small parts that could become detached and create a choking hazard.

Emergency calls
IMPORTANT!

This product and the electronic device connected to the handsfree operate using radio signals, cellular, *Bluetooth*® wireless technology and landline networks as well as user-programmed functions, which cannot guarantee connection under all conditions. Therefore you should never rely solely upon any electronic device for essential communications (e.g. medical emergencies).

Remember, in order to make or receive calls, *Bluetooth*® Audio/Mobile-phone Transceiver, *Bluetooth*® Audio Transmitter and the electronic device connected to the handsfree must be switched on and in a service area with adequate cellular signal strength. Emergency calls may not be possible on all cellular phone networks or when certain network services and/or phone features are in use. Check with your local service provider.

CAUTION!

If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private households in the 25 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one). For countries not mentioned above, please contact your local authorities for the correct method of disposal.By doing so you will ensure that your disposed product under goes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.